

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: June 7, 2004, 13:59:55 ; Search time 3212.5 Seconds  
(without alignments)  
9714.236 Million cell updates/sec

Title: US-10-035-300A-1

Perfect score: 720

Sequence: 1 atggctaccacacattaa.....tgctggcgataaagagtaa 720

Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 3470272 seqs, 21671516995 residues

Total number of hits satisfying chosen parameters: 6940544

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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1: gb.ba.\*  
2: gb.htg.\*  
3: gb.in.\*  
4: gb.om.\*  
5: gb.ov.\*  
6: gb.pat.\*  
7: gb.ph.\*  
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40: em.htgo.mus.\*  
41: em.htgo.other.\*

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Match	Length	DB ID	Description
1	716.8	99.6	720	6	AX087917 Sequence
2	716.8	99.6	720	6	AX590437 Sequence
3	716.8	99.6	720	6	BD187724 A method
4	716.8	99.6	1249	1	MG0917 E. coli puri
5	716.8	99.6	3031	6	BD261823 Recombina
6	716.8	99.6	3031	6	AX027820 Sequence
7	716.8	99.6	3128	6	BD261824 Recombina
8	716.8	99.6	3128	6	AX027821 Sequence
9	716.8	99.6	3383	6	BD261814 Recombina
10	716.8	99.6	3383	6	AX027811 Sequence
11	716.8	99.6	3934	6	BD261825 Recombina
12	716.8	99.6	3934	6	AX027822 Sequence
13	716.8	99.6	4189	6	BD261816 Recombina
14	716.8	99.6	4189	6	AX027813 Sequence
15	716.8	99.6	5013	6	AR264513 Sequence
16	716.8	99.6	5241	6	BD261818 Recombina
17	716.8	99.6	5241	6	AX027815 Sequence
18	716.8	99.6	5495	6	BD261815 Recombina
19	716.8	99.6	5495	6	AX027812 Sequence
20	716.8	99.6	6046	6	BD261826 Recombina
21	716.8	99.6	6046	6	AX027823 Sequence
22	716.8	99.6	6269	6	BD261820 Recombina
23	716.8	99.6	6269	6	AX027817 Sequence
24	716.8	99.6	6299	6	BD261821 Recombina
25	716.8	99.6	6299	6	AX027818 Sequence
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27	716.8	99.6	6301	6	AX027814 Sequence
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31	716.8	99.6	338534	1	ECOU993
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35	699.2	97.1	10535	1	AE015447 Shigella
36	699.2	97.1	225944	1	AE016993 Escherich
37	688	95.6	86898	1	AE016772 Escherich
38	598.4	83.1	21405	1	AE008915 Salmonell
39	587.2	81.6	88037	1	AL627284 Salmonell
40	587.2	81.6	284233	1	AE016849 Salmonell
41	558.4	77.6	732	6	AR384902 Sequence
42	527.8	73.3	720	1	XSENPGENE
43	480	66.7	11093	1	AE013977 Klebsiella
44	480	66.7	214050	1	AJ414142 Yersinia
45	449.2	62.4	349287	1	BX571860 Photorhab

# ALIGNMENTS

RESULT 1	AX087917	Sequence 3 from Patent WO0114566.	720 bp	DNA	linear	PAT 17-MAR-2001
LOCUS	AX087917					
DEFINITION	Sequence 3 from Patent WO0114566.					
ACCESSION	AX087917					
VERSION	AX087917.1	GI:13396895				
KEYWORDS						
SOURCE	Escherichia coli					
ORGANISM	Escherichia coli					
REFERENCE	1	Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.				
AUTHORS	Tischer, W., Ihlenfeldt, H.G., Barzu, O., Sakamoto, H., Pistotnik, E., Marliere, P. and Pochet, S.					
TITLE	Enzymatic synthesis of deoxyribonucleosides					

JOURNAL Patent: WO 0114566-A 3 01-MAR-2001;  
Roche Diagnostics GmbH (DE); INSTITUT PASTEUR (FR); Pharma-  
Waldhof GmbH & Co. KG (DE)  
FEATURES  
source 1. .720  
Location/Qualifiers  
/organism="Escherichia coli"  
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/db\_xref="taxon:562"  
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CDS  
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ORIGIN  
Query Match 99.6%; Score 716.8; DB 6; Length 720;  
Best Local Similarity 99.7%; Pred. No. 6.2e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
Qy 1 ATGGCTACCCACACATTAATGCGAAGATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60  
Db 1 ATGGCTACCCACACATTAATGCGAAGATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60  
Qy 61 GCGCACCCTGCGTGGCGAAGTATATGCTGAACCTTCTTGAAGATGCCCGTGAAGTG 120  
Db 61 GCGCACCCTGCGTGGCGAAGTATATGCTGAACCTTCTTGAAGATGCCCGTGAAGTG 120  
Qy 121 AACAACTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 180  
Db 121 AACAACTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 180  
Qy 181 ATGGGTACCGGTATGGTATCCGCTGCTGCTTACACCAAGAACTGATCACCGAT 240  
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Qy 361 TTTAAGACCAATGACTTTGCGGCTATCGCTGACCTGCGGTACCTGTTCTCCGCTGACCTGTC 420  
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Db 481 TACTCTCCGACGCGGAAATGTTGACGTGATGAAATAATACGGCAATTTCTCGCGTGGAA 540  
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Db 661 ACCTTCAACGATGATCAAAATCGCACTGGATCCGTTCTGCTGGGCGATTAAGAGTAA 720

RESULT 2  
AX590437  
LOCUS 720 bp DNA linear PAT 27-JAN-2003  
DEFINITION Sequence 3 from Patent EPI254959.  
AX590437  
ACCESSION AX590437  
VERSION AX590437.1 GI:27949070  
KEYWORDS  
SOURCE Escherichia coli  
ORGANISM Escherichia coli  
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;  
Enterobacteriaceae; Escherichia.  
REFERENCE  
AUTHORS Araki, T.; Ikeda, I.; Matoishi, K.; Abe, R.; Oikawa, T.; Matsuba, Y.;  
Ishibashi, H.; Nagahara, K. and Fukui, Y.  
TITLE Method for producing cytosine nucleoside compounds  
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;  
MITSUI CHEMICALS, INC. (JP)  
FEATURES  
source 1. .720  
Location/Qualifiers  
/organism="Escherichia coli"  
/mol\_type="unassigned DNA"  
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ORIGIN  
Query Match 99.6%; Score 716.8; DB 6; Length 720;  
Best Local Similarity 99.7%; Pred. No. 6.2e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
Qy 1 ATGGCTACCCACACATTAATGCGAAGATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60  
Db 1 ATGGCTACCCACACATTAATGCGAAGATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60  
Qy 61 GCGCACCCTGCGTGGCGAAGTATATGCTGAACCTTCTTGAAGATGCCCGTGAAGTG 120  
Db 61 GCGCACCCTGCGTGGCGAAGTATATGCTGAACCTTCTTGAAGATGCCCGTGAAGTG 120  
Qy 121 AACAACTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 180  
Db 121 AACAACTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 180  
Qy 181 ATGGGTACCGGTATGGTATCCGCTGCTGCTTACACCAAGAACTGATCACCGAT 240  
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Qy 241 TTCGGCGTGAAGAAATTAATCCGGTGGTTCCTGCGGAGTTCGCCGACGTAAAA 300  
Db 241 TTCGGCGTGAAGAAATTAATCCGGTGGTTCCTGCGGAGTTCGCCGACGTAAAA 300  
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Db 301 CTGCGCGACGTCGTTATCGGTATGGTATCGCTGCGGTACCTGTTCTCCGCTGACCTGTC 360  
Qy 361 TTTAAGACCAATGACTTTGCGGCTATCGCTGACCTGCGGTACCTGTTCTCCGCTGACCTGTC 420  
Db 361 TTTAAGACCAATGACTTTGCGGCTATCGCTGACCTGCGGTACCTGTTCTCCGCTGACCTGTC 420  
Qy 421 GCAGCTAAGCACTGGGTATGATGCTCGCGTGGTAACTGTTCTCCGCTGACCTGTC 480  
Db 421 GCAGCTAAGCACTGGGTATGATGCTCGCGTGGTAACTGTTCTCCGCTGACCTGTC 480  
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Db 481 TACTCTCCGACGCGGAAATGTTGACGTGATGAAATAATACGGCAATTTCTCGCGTGGAA 540  
Qy 541 ATGAAGCGGCTGGTATCTACGGGTGCTGCGAATTTGGCGGAAGCCCTGACCATC 600  
Db 541 ATGAAGCGGCTGGTATCTACGGGTGCTGCGAATTTGGCGGAAGCCCTGACCATC 600  
Qy 601 TGCAACCGTATCTGACCAATCGCACTCACGAGCAGACCACTGCGGTGACGCTCAGACT 660  
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Qy 661 ACCTTCAACGATGATCAAAATCGCACTGGATCCGTTCTGCTGGGCGATTAAGAGTAA 720  
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Qy	361	TTTAAAGACCATGACTTTTGGCGCTATCGCTGACCTTCGACATTCGACATGTCGCTAAACGACGTAGAT	420
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Qy	421	GCAGCTAAAGCAGCTGGGTATTGATGCTCGCGTGGGTACCTGTTCTCCGCTGACCTGTTTC	480
Db	421	GCAGCTAAAGCAGCTGGGTATTGATGCTCGCGTGGGTACCTGTTCTCCGCTGACCTGTTTC	480
Qy	481	TACTCTCCGACCGCGCAAAATGTTTCGACGCTGATGGAATAATACGGCAATTCCTCGGCGTGGAA	540
Db	481	TACTCTCCGACCGCGCAAAATGTTTCGACGCTGATGGAATAATACGGCAATTCCTCGGCGTGGAA	540
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Db	541	ATGGAAGCGGTGCTATCTACCGCGTTCGCTCAGAAATTTGGCGGGAAGACCTCGTACCATC	600
Qy	601	TGCACCGTATCTGACCAATCCGACATCCAGACGACAGACCATGTCGGCTGAGCGTCAGACT	660
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Qy	661	ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGGCGATAAAGAGTAA	720
Db	661	ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGGCGATAAAGAGTAA	720
RESULT 4			
ECOPNP		1249 bp DNA linear	BCT 26-APR-1999
LOCUS		E.coli purine nucleoside phosphorylase (deod) gene, complete cds.	
DEFINITION			
ACCESSION		M60917	
VERSION		M60917.1	GI:147308
KEYWORDS		purine nucleoside phosphorylase.	
SOURCE		Escherichia coli	
ORGANISM		Escherichia coli	
REFERENCE		Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;	
AUTHORS		Enterobacteriaceae; Escherichia.	
		1 (bases 1 to 1249)	
		Hersfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A.	
		and Short,S.A.	
		Use of site-directed mutagenesis to enhance the epitope-shielding	
		effect of covalent modification of proteins with polyethylene	
		glycol	
JOURNAL		Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)	
MEDLINE		91334430	
PUBMED		1714590	
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Best Local Similarity 99.7%; Pred. No. 6.4e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGCTACCCACACATTAATGAGAAATGGGGATTTGCTGACGTAGTTTGTATGCCA 60  
DB 123 ATGGCTACCCACACATTAATGAGAAATGGGGATTTGCTGACGTAGTTTGTATGCCA 182

QY 61 GGGACCCCGTGGGTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGTGAAGTG 120  
DB 183 GGGACCCCGTGGGTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGTGAAGTG 242

QY 121 AACAAAGTTGCGGTGATGCTGGGCTTACCGGTACTTACAAAGCCGCGAAATTTCCGTA 180  
DB 243 AACAAAGTTGCGGTGATGCTGGGCTTACCGGTACTTACAAAGCCGCGAAATTTCCGTA 302

QY 181 ATGGGTACCGGTGATGCTGGGTATCCCGTCTGCTTCCATCTACACCAAGAACTGATCACCGAT 240  
DB 303 ATGGGTACCGGTGATGCTGGGTATCCCGTCTGCTTCCATCTACACCAAGAACTGATCACCGAT 362

QY 241 TTGGGCTGAAGAAATTAATCCCGTGGGTTCCTGTGGCGAGTTTCGCGCAAGTAAAA 300  
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QY 301 CTGGCGACGTGTTATCGGTATGGGTGCTGACCGATTTCCAAAGTTAACCGCATCCGT 360  
DB 423 CTGGCGACGTGTTATCGGTATGGGTGCTGACCGATTTCCAAAGTTAACCGCATCCGT 482

QY 361 TTTAAAGACCATGACTTTGCGGTATCGGTGACTTTCGACATGGTTCGCTAACCGAGTAGAT 420  
DB 483 TTTAAAGACCATGACTTTGCGGTATCGGTGACTTTCGACATGGTTCGCTAACCGAGTAGAT 542

QY 421 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGCTGACCTGTC 480  
DB 543 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGCTGACCTGTC 602

QY 481 TACTCTCGGACGGCGAAATGTTGCGAGTATGAGAAATACGGCATTTCTCGGCGTGGAA 540  
DB 603 TACTCTCGGACGGCGAAATGTTGCGAGTATGAGAAATACGGCATTTCTCGGCGTGGAA 662

QY 541 ATGGAAGCGGTGATATACGGGTGCTGCGAGATTTGGCGGAAAGCCCTGACCATC 600  
DB 663 ATGGAAGCGGTGATATACGGGTGCTGCGAGATTTGGCGGAAAGCCCTGACCATC 722

QY 601 TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 660  
DB 723 TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 782

QY 661 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATTAAGAGTAA 720  
DB 783 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATTAAGAGTAA 842

## RESULT 5

BD261823 3031 bp DNA linear PAT 17-JUL-2003  
LOCUS  
DEFINITION Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof.  
ACCESSION BD261823  
VERSION 1  
KEYWORDS JP 2002533126-A/12.  
SOURCE synthetic construct  
ORGANISM  
REFERENCE 1 (bases 1 to 3031)  
AUTHORS Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.  
TITLE Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof  
JOURNAL Patent: JP 2002533126-A 12 08-OCI-2002;  
NORPHARMA SPA  
COMMENT OS Artificial Sequence

PN JP 2002533126-A/12.  
PD 08-OCT-2002  
PR 23-DEC-1999 JP 20005911198  
PR 23-DEC-1998 IT MI 98A002792  
PI GIUSEPPINA BISTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PIORSINI,  
PI GIANCARLO TONON, GABRIELE ZUFFI  
PC C12N15/09, C12N9/10, C12P19/38, C12P19/40, C12N15/00 CC  
Description of Artificial Sequence: udp and deod cloned into CC  
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CC without upstream ptac promoter  
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/mol\_type="genomic DNA"  
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## FEATURES

source

## ORIGIN

Query Match 99.6%; Score 716.8; DB 6; Length 3031;  
Best Local Similarity 99.7%; Pred. No. 6.9e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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QY 61 GGGACCCCGTGGGTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGTGAAGTG 120  
DB 161 GGGACCCCGTGGGTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGTGAAGTG 220

QY 121 AACAAAGTTGCGGTGATGCTGGGTGCTGACCGATTTACAAAGCCGCGAAATTTCCGTA 180  
DB 221 AACAAAGTTGCGGTGATGCTGGGTGCTGACCGATTTACAAAGCCGCGAAATTTCCGTA 280

QY 181 ATGGGTACCGGTGATGCTGGGTGCTGACCGATTTACAAAGCCGCGAAATTTCCGTA 240  
DB 281 ATGGGTACCGGTGATGCTGGGTGCTGACCGATTTACAAAGCCGCGAAATTTCCGTA 340

QY 241 TTGGGCTGAAGAAATTAATCCCGTGGGTTCCTGTGGCGAGTTCTGCGCGACGTAAAA 300  
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QY 301 CTGGCGACGTGCTTATCGGTATGGGTGCTGACCGATTTCCAAAGTTAACCGCATCCGT 360  
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DB 521 GCAGCTAAAGCACTGGGTATGATGCTGGGTGCTGACCGATTTCCGCTGACCTGTTTC 580

QY 481 TACTCTCGGACGGCGAAATGTTGCGAGTATGAGAAATACGGCATTTCTCGGCGTGGAA 540  
DB 581 TACTCTCGGACGGCGAAATGTTGCGAGTATGAGAAATACGGCATTTCTCGGCGTGGAA 640

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QY 601 TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 660  
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QY 661 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATTAAGAGTAA 720  
DB 761 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATTAAGAGTAA 820

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RESULT 6
AX027820
LOCUS          3031 bp      DNA      linear      PAT 16-SEP-2000
DEFINITION    Sequence 12 from Patent WO0039307.
ACCESSION     AX027820
VERSION       AX027820.1 GI:10188664
KEYWORDS      synthetic construct
SOURCE        artificial sequences.
ORGANISM
REFERENCE
1. Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
   Recombinant bacterial strains for the production of natural
   nucleosides and modified analogues thereof
   Patent: WO 0039307-A 12 06-JUL-2000;
   BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
   ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
   GHISOTTI DANIELA (IT)
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       /note="udp and deod cloned into pGM746 without upstream
       ptac promoter"
ORIGIN
    Query Match          99.6%; Score 716.8; DB 6; Length 3031;
    Best Local Similarity 99.7%; Pred. No. 6.9e-182;
    Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

    QY 1 ATGGCTACCCACACATTAAATGAGAAATGGCGATTTTCGCTGACGTAGTTTGATGCCA 60
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    QY 61 GCGGACCCGCTCGGCGGAGTATATGCTGGAACATTTCTTGAAGATCCCGTGGAAGTG 120
    Db 161 GCGGACCCGCTCGGCGGAGTATATGCTGGAACATTTCTTGAAGATCCCGTGGAAGTG 220
    QY 121 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 180
    Db 221 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 280
    QY 181 ATGGGTACGGTGTGGTATCCGTCCTGCTCCATCTACACAAAGAACTGATCAACCGAT 240
    Db 281 ATGGGTACGGTATGGTATCCGTCCTGCTCCATCTACACAAAGAACTGATCAACCGAT 340
    QY 241 TTCCGGGTGAAGAAATTAATCCGCGTGGGTTCCTGTGGCGGAGTTCTGCCGACGTAATA 300
    Db 341 TTCCGGGTGAAGAAATTAATCCGCGTGGGTTCCTGTGGCGGAGTTCTGCCGACGTAATA 400
    QY 301 CTGCGGACGTCGTTATCCGTATGGGTGCTGCACCGATTCACAAAGTTAAACCGCATCCGT 360
    Db 401 CTGCGGACGTCGTTATCCGTATGGGTGCTGCACCGATTCACAAAGTTAAACCGCATCCGT 460
    QY 361 TTTAAGACCATGACTTTCCCGCTATCGCTGACTTCGACATGTCGATGCGTAACCGTAGAT 420
    Db 461 TTTAAGACCATGACTTTCCCGCTATCGCTGACTTCGACATGTCGATGCGTAACCGTAGAT 520
    QY 421 GCAGCTAAGCACTGGGTATTAATGCTCCGCTGGGTAACTGTTCTCCGCTGACCTGTTTC 480
    Db 521 GCAGCTAAGCACTGGGTATTAATGCTCCGCTGGGTAACTGTTCTCCGCTGACCTGTTTC 580
    QY 481 TACTCTCCGAGCGCGGAAATTTTCGACGTGATGGAAAAATACGGCAATTCCTCGGCGTGA 540
    Db 581 TACTCTCCGAGCGCGGAAATTTTCGACGTGATGGAAAAATACGGCAATTCCTCGGCGTGA 640
    QY 541 ATGGAAGCGGCTGGTATCTACGCGCTGCTGACAGAAATTTGGCGGAAAGCCCTGACCATC 600
    Db 641 ATGGAAGCGGCTGGTATCTACGCGCTGCTGACAGAAATTTGGCGGAAAGCCCTGACCATC 700
    QY 601 TGCACCGTATCTGACACATCCGACTCCGACGACGACCACTGCCGCTCAGGCGTCAGACT 660
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Db 701 TGCACCGTATCTGACACATCCGACTCAGAGACACCACTGCCGCTCAGGCTCAGACT 760
QY 661 ACCTTCAAGCAGCATGATCAAAATCGCACTCGGAATCGGTTCTCTGGGCCATAAAGAGTAA 720
Db 761 ACCTTCAAGCAGCATGATCAAAATCGCACTCGGAATCGGTTCTCTGGGCCATAAAGAGTAA 820

RESULT 7
BD261824
LOCUS          3128 bp      DNA      linear      PAT 17-JUL-2003
DEFINITION    Recombinant bacterial strains for the production of natural
               nucleosides and modified analogues thereof.
ACCESSION     BD261824
VERSION       BD261824.1 GI:33071592
KEYWORDS      JP 2002533126-A/13.
SOURCE        synthetic construct
ORGANISM      synthetic construct
               artificial sequences.
REFERENCE
1. (bases 1 to 3128)
   Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
   Recombinant bacterial strains for the production of natural
   nucleosides and modified analogues thereof
   Patent: JP 2002533126-A 13 08-OCT-2002;
   NORPHARMA SPA
COMMENT
    OS Artificial Sequence
    PN JP 2002533126-A/13
    PD 08-OCT-2002
    PF 23-DEC-1999 JP 2000591198
    PR 23-DEC-1998 IT MI 98A002792
    PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
    ORSINI,
    PI GIANCARLO TONON, GABRIELE ZUFFI
    PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
    Description of Artificial Sequence: deod cloned downstream CC
    Ptac promoter
    FH Key Location/Qualifiers
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       Location/Qualifiers
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ORIGIN
    Query Match          99.6%; Score 716.8; DB 6; Length 3128;
    Best Local Similarity 99.7%; Pred. No. 6.9e-182;
    Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

    QY 1 ATGGCTACCCACACATTAAATGAGAAATGGCGATTTTCGCTGACGTAGTTTGATGCCA 60
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    QY 61 GCGGACCCGCTCGGCGGAGTATATGCTGAAACTTTTCCTTGAAGATCCCGTGGAAGTG 120
    Db 258 GCGGACCCGCTCGGCGGAGTATATGCTGAAACTTTTCCTTGAAGATCCCGTGGAAGTG 317
    QY 121 AACACAGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 180
    Db 318 AACACAGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 377
    QY 181 ATGGGTACGGTGTGGTATCCCGTCTGCTCATCTACACAAAGAACTGATCAACCGAT 240
    Db 378 ATGGGTACGGTATGGGTATCCCGTCTGCTCATCTACACAAAGAACTGATCAACCGAT 437
    QY 241 TTCCGGGTGAAGAAATTAATTCGCGTGGGTTCCTGTGGCGAGTTCCTGCCGACGTAATA 300
    Db 438 TTCCGGGTGAAGAAATTAATTCGCGTGGGTTCCTGTGGCGAGTTCCTGCCGACGTAATA 497
    QY 301 CTGCGGACGTCGTTATCGGTATGGTTCGCTGACCGATTCCAAAGTTAAACCGCATCCGT 360
    Db 498 CTGCGGACGTCGTTATCGGTATGGTTCGCTGACCGATTCCAAAGTTAAACCGCATCCGT 557
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Qy	1	ATGCTACCCACACATTAATGCGAGAAATGGCGAATTCGCTGACGTAGTTTTCATGCCCA	60
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Qy	61	GGCACCCTGCGTGGCGAAGTATATGCTCAAACTTTCCTTGAAGATGCCCGTGAAGTG	120
Db	300	GGCACCCTGCGTGGCGAAGTATATGCTGAACCTTTCCTTGAAGATGCCCGTGAAGTG	359
Qy	121	AACAAGTTTCGCGTATGCTGGGCTTACCGGTACTTACAAGGCGCAAAATTTCCGTA	180
Db	360	AACAAGTTTCGCGTATGCTGGGCTTACCGGTACTTACAAGGCGCAAAATTTCCGTA	419
Qy	181	ATGGGTCAACGGTGTGGTATCCCGTCTGCTCCATCTACACAAGAACTCATCACCGAT	240
Db	420	ATGGGTCAACGGTGTGGTATCCCGTCTGCTCCATCTACACAAGAACTCATCACCGAT	479
Qy	241	TTCCGCGTGAAGAAAAATTATCCGCTGGGTTTCCTGTGGCGAGTTCTGCCGACGTAATA	300
Db	480	TTCCGCGTGAAGAAAAATTATCCGCTGGGTTTCCTGTGGCGAGTTCTGCCGACGTAATA	539
Qy	301	CTCGCGACGTCGTTATCGGTATGGGTGCCTGCACCGATTCCAAAGTTAAACGGATCCGT	360
Db	540	CTCGCGACGTCGTTATCGGTATGGGTGCCTGCACCGATTCCAAAGTTAAACGGATCCGT	599
Qy	361	TTTAAAGACCATGACTTTTCGCGCTATCGCTGACTTTCGACATGCTGCGTAAACGAGTAGAT	420
Db	600	TTTAAAGACCATGACTTTTCGCGCTATCGCTGACTTTCGACATGCTGCGTAAACGAGTAGAT	659
Qy	421	GCAGCTAAAGCACTGGGTATTGATGCTCGGTGGGTAACTTGTTCTCGCTGACCTGTTTC	480
Db	660	GCAGCTAAAGCACTGGGTATTGATGCTCGGTGGGTAACTTGTTCTCGCTGACCTGTTTC	719
Qy	481	TACTCTCCGACGGCGAAATGTTCCGACTGTATGGAAAAATACGGCATTTCTCGGCGTGAA	540
Db	720	TACTCTCCGACGGCGAAATGTTCCGACTGTATGGAAAAATACGGCATTTCTCGGCGTGAA	779
Qy	541	ATGGAAGCGCTGGTATCTACGGGCTCGCTCGAAGTTTGGCGGAAACGCTGTGACCATC	600
Db	780	ATGGAAGCGCTGGTATCTACGGGCTCGCTCGAAGTTTGGCGGAAACGCTGTGACCATC	839
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Db	840	TGCACCGTATCTGACCATCCGCACTCAAGACGACCACTGCGCGTGAAGGTGAGACT	899
Qy	661	ACCTTCAACGACATGATCAAAATCCGACTGGAATCCGTTCTGCTGGGGGATTAAGAGTAA	720
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RESULT 10
AX027811
LOCUS       3383 bp          linear      DNA
DEFINITION  Sequence 3 from Patent WO0039307.
ACCESSION   AX027811
VERSION     AX027811.1 GI:10188655
KEYWORDS    .
SOURCE      synthetic construct
            artificial sequences.
REFERENCE   1
AUTHORS     Bestetti G., Cali S., Orsini G., Tonon G., Zuffi G. and Ghisotti, D.
TITLE       Recombinant bacterial strains for the production of natural
            nucleosides and modified analogues thereof
JOURNAL     Patent: WO 0039307-A 3 06-JUL-2000;
            BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
            ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
            GHISOTTI DANIELA (IT)
FEATURES    Location/Qualifiers
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ORIGIN	Query Match	99.6%; Score 716.8; DB 6; Length 3383;
	Best Local Similarity 99.7%; Pred. No. 6,9e-182;	
	Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;	
Qy	1	ATGGCTACCCACACATTAATGCAGAAATGGCGATTTGCTGACGTAGTTTGTATGCCA 60
Db	240	ATGGCTACCCACACATTAATGCAGAAATGGCGATTTGCTGACGTAGTTTGTATGCCA 299
Qy	61	GGGACCGCTGCGTGCAGATATATGCTGAAACTTTCCTTCAAGATGCCGTGAAGTG 120
Db	300	GGGACCGCTGCGTGCAGATATATGCTGAAACTTTCCTTCAAGATGCCGTGAAGTG 359
Qy	121	AACAAAGCTTCGCGTATGCTGGGCTTCAACCGGTACTTACAAAGCCGCAAAATTTCCGTA 180
Db	360	AACAAAGCTTCGCGTATGCTGGGCTTCAACCGGTACTTACAAAGCCGCAAAATTTCCGTA 419
Qy	181	ATGGGTACAGGTGTGTGTATCCGTCCTGCTCCATCTACACCAAGAACTGATCACCGAT 240
Db	420	ATGGGTACAGGTATGGGTATCCGTCCTGCTCCATCTACACCAAGAACTGATCACCGAT 479
Qy	241	TTGGCGGTGAAGAAAATTAATCCGCGTGGGTTTCCTGTGGCGCAGTTCTGCGCGCAGTAAAA 300
Db	480	TTGGCGGTGAAGAAAATTAATCCGCGTGGGTTTCCTGTGGCGCAGTTCTGCGCGCAGTAAAA 539
Qy	301	CTGGCGACGTCGTTATCGGTATGGGTGCTGACACCGATTCCAAAGTTAACCGCATCCGT 360
Db	540	CTGGCGACGTCGTTATCGGTATGGGTGCTGACACCGATTCCAAAGTTAACCGCATCCGT 599
Qy	361	TTTAAAGACCATGACTTTGGCGGTATCGCTGACTTCGACATGGTGCCTAAGCAGTAGAT 420
Db	600	TTTAAAGACCATGACTTTGGCGGTATCGCTGACTTCGACATGGTGCCTAAGCAGTAGAT 659
Qy	421	GCAGCTAAAGCAGCTGGGTATGATGCTCGCGTGGGTAACTGTTCTCGCGTACCTGTTC 480
Db	660	GCAGCTAAAGCAGCTGGGTATGATGCTCGCGTGGGTAACTGTTCTCGCGTACCTGTTC 719
Qy	481	TACTCTCCGACGGCGAAAATGTTTCGACGTGATGAAAAAATACGGCATTTCTCGCGTGGAA 540
Db	720	TACTCTCCGACGGCGAAAATGTTTCGACGTGATGAAAAAATACGGCATTTCTCGCGTGGAA 779
Qy	541	ATGAAAGCGGTGATCTACTACGGCGTCGCTGCAGAAATTTGGCGCGAAGCCCTGACCATC 600
Db	780	ATGAAAGCGGTGATCTACTACGGCGTCGCTGCAGAAATTTGGCGCGAAGCCCTGACCATC 839
Qy	601	TGCACCGTATCTGACCAACATCCGACATCAGAGCAGACCACTGCGCTGAGCGTCAGACT 660
Db	840	TGCACCGTATCTGACCAACATCCGACATCAGAGCAGACCACTGCGCTGAGCGTCAGACT 899
Qy	661	ACCTTTCAACGACATGATCAAAATCGCACTTGGAAATCCGTTCTGCTGGGCGATAAAGAGTAA 720
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RESULT 11		
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LOCUS	BD261825	3934 bp DNA linear PAT 17-JUL-2003
DEFINITION	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof.	
ACCESSION	BD261825	
VERSION	BD261825.1	GI:33071593
KEYWORDS	JP 2002533126-A/14.	
SOURCE	synthetic construct	
ORGANISM	artificial sequences.	
REFERENCE	1 (bases 1 to 3934)	
AUTHORS	Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.	
TITLE	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof	
JOURNAL	Patent: JP 2002533126-A 14 08-OCT-2002;	
COMMENT	NORPHARMA SPA	
	OS Artificial Sequence	

PN JP 2002533126-A/14  
PD 08-OCT-2002  
PF 23-DEC-1999 JP 2000591198  
PR 23-DEC-1998 IT MI 98A002792  
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI  
ORSINI,  
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC  
Description of Artificial Sequence: udp and deoD cloned  
CC downstream ptac  
FH Key  
FT source  
FEATURES  
source  
ORIGIN  
Query Match 99.6%; Score 716.8; DB 6; Length 3934;  
Best Local Similarity 99.7%; Pred. No. 7e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 ATGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCGATGCCA 60  
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QY 61 GGCACCGCTGCGTGGAGTATATTGCTGAAACTTTTCCTTGAAGATGCCGCGTGAAGTG 120  
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QY 661 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATTAAGAGTAA 720  
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RESULT 12  
AX027822  
LOCUS AX027822  
DEFINITION Sequence 14 from Patent WO0039307.  
ACCESSION AX027822  
VERSION AX027822.1 GI:10188666  
KEYWORDS synthetic construct  
SOURCE synthetic construct  
ORGANISM artificial construct  
REFERENCE 1  
AUTHORS Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.  
TITLE Recombinant bacterial strains for the production of natural  
JOURNAL nucleosides and modified analogues thereof  
Patent: WO 0039307-A 14 06-JUL-2000;  
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);  
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);  
GHISOTTI DANIELA (IT)  
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Location/Qualifiers  
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Query Match 99.6%; Score 716.8; DB 6; Length 3934;  
Best Local Similarity 99.7%; Pred. No. 7e-182;  
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 ATGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCGATGCCA 60  
DB 198 ATGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCGATGCCA 257  
QY 61 GGCACCGCTGCGTGGAGTATATTGCTGAAACTTTTCCTTGAAGATGCCGCGTGAAGTG 120  
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Db 798 TGCACCGTATCTGACCATCGCACTCAGGAGCAGACCACTGCCGCTGAGCGTCAGACT 857
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RESULT 13
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LOCUS
DEFINITION
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION
BD261816
VERSION
JP 2002533126-A/5.
KEYWORDS
synthetic construct
ORGANISM
synthetic construct
artificial sequences.
1 (bases 1 to 4189)
REFERENCE
Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: JP 2002533126-A 5 08-OCT-2002;
JOURNAL
NORPHARMA SPA
COMMENT
OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PI 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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FT gene
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Location/Qualifiers
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FEATURES
source
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Query Match 99.6%; Score 716.8; DB 6; Length 4189;
Best Local Similarity 99.7%; Pred. No. 7e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 ATGGCTACCCACACATTAAATGCGAATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60
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Qy 61 GCGGACCGCTCGCGGAGATATATGCTGAACTTTCCTTGAAGTCCCGTGAAGTG 120
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Qy 121 AACACGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
Db 1166 AACACGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 1225
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RESULT 14
AX027813 4189 bp DNA linear PAT 16-SEP-2000
LOCUS
DEFINITION
Sequence 5 from Patent WO0039307.
ACCESSION
AX027813
VERSION
AX027813.1 GI:10188657
KEYWORDS
synthetic construct
SOURCE
synthetic construct
artificial sequences.
ORGANISM
synthetic construct
artificial sequences.
1
REFERENCE
Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: WO 0039307-A 5 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
Location/Qualifiers
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Query Match 99.6%; Score 716.8; DB 6; Length 4189;
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Qy 121 AACACGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
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Db 1286 TTCGGGTGAAGAAAATTAATATCCGCGTGGGTTCCTGTGGCGGAGTCTGCGGACGTAATA 1345
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DEFINITION Sequence 5 from patent US 6491905.  
ACCESSION AR264513  
VERSION AR264513.1 GI:29692752  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 5013)  
AUTHORS Sorscher,E.J., Parker,W.B., Waud,W., Gadi,V.K. and Bennett,L.I. Jr.  
TITLE Recombinant bacterial cells for delivery of ENP to tumor cells  
JOURNAL Patent: US 6491905-A 5 10-DEC-2002;  
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Db	473	GGCGACCGCTGCGTGGAGTATATTTGCTGAAACTTTCTTGAAGATGCCCGTGAAGTG	532
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Db	533	AACAGCTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA	592
Qy	181	ATGGGTACCGGTGTTGGTATCCGCTCTGCTCCATCTACACCAAGAACTGATCACCGAT	240
Db	593	ATGGGTACCGGTGTTGGTATCCGCTCTGCTCCATCTACACCAAGAACTGATCACCGAT	652
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GenCore version 5.1.6  
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Run on: June 8, 2004, 03:05:11 ; Search time 2814 Seconds

(without alignments)  
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Perfect score: 1225

Sequence: 1 MATPHINAEMGDFADVIMP.....TTFNDMIKIALESVILGDKE 239

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Ygapop 10.0 , Ygapext 0.5  
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Searched: 3470272 seqs, 21671516995 residues

Total number of hits satisfying chosen parameters: 6940544

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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14: gb\_vi.\*  
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

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1	1222	99.8	720	6	AX087917 Sequence
2	1222	99.8	720	6	AX590437 Sequence
3	1222	99.8	720	6	BD187724 A method
4	1222	99.8	1249	1	M60917 E.coli puri
5	1222	99.8	3031	6	BD261823 Recombina
6	1222	99.8	3031	6	AX027820 Sequence
7	1222	99.8	3128	6	BD261824 Recombina
8	1222	99.8	3128	6	AX027821 Sequence
9	1222	99.8	3383	6	BD261814 Recombina
10	1222	99.8	3383	6	AX027811 Sequence
11	1222	99.8	3934	6	BD261825 Recombina
12	1222	99.8	3934	6	AX027822 Sequence
13	1222	99.8	4189	6	BD261816 Recombina
14	1222	99.8	4189	6	AX027813 Sequence
15	1222	99.8	5013	6	AR264513 Sequence
16	1222	99.8	5241	6	BD261818 Recombina
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21	1222	99.8	6046	6	AX027823 Sequence
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# ALIGNMENTS

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DEFINITION Sequence 3 from Patent WO0114566.
ACCESSION AX087917
VERSION AX087917.1 GI:13396895
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE
AUTHORS Tischer,W., Ihlenfeldt,H.G., Barzu,O., Sakamoto,H., Pistotnik,E.,
Marliere,P. and Pochet,S.
TITLE Enzymatic synthesis of deoxyribonucleosides
JOURNAL Patent: WO 0114566-A 3 01-MAR-2001.
Roche Diagnostics GmbH (DE) ; INSTITUT PASTEUR (FR) ; Pharma-
Walldhof GmbH & Co. KG (DE)
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Pred. No.: 2,21e-110 Length: 720
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Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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LOCUS AX590437 720 bp DNA linear PAT 27-JAN-2003
DEFINITION Sequence 3 from Patent EP1254959.
ACCESSION AX590437
VERSION AX590437.1 GI:27949070
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Ishibashi,H., Nagahara,K. and Fukui,Y.
TITLE Method for producing cytosine nucleoside compounds
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;
MITSUI CHEMICALS, INC. (JP)
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ORIGIN
Alignment Scores:
Pred. No.: 2,21e-110 Length: 720
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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DEFINITION BD187724.1 GI:32997463  
 VERSION JP 2003018997-A/3.  
 KEYWORDS Escherichia coli  
 SOURCE Escherichia coli  
 ORGANISM Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.

REFERENCE Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,  
 Nagahara,K., Fukui,Y., and Ishibashi,H.  
 A method of producing a cytosine nucleoside compound  
 Patent: JP 2003018997-A.3 21-JAN-2003;  
 MITSUI CHEMICALS INC  
 COMMENT OS Escherichia coli  
 PN JP 2003018997-A/3  
 PD 21-JAN-2003

PF 01-MAY-2002 JP 2002129867  
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 PI OIKAWA,  
 PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUI, HIROKI  
 ISHIBASHI  
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## ORIGIN

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 Score: 100.00% Conservative: 1  
 Percent Similarity:

Best Local Similarity: 99.58% Mismatches: 0  
 Query Match: 99.76% Indels: 0  
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 Db 421 GCAGCTAAGCAGTGGGTATGATGCTCGGTGGTAACTGTTCTCGCTGACCTGTTTC 480  
 Qy 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180  
 Db 481 TACTCTCGGACGGCGAAATGTCGACGTGATGGAAATAATACGGCATTCCTCGGCGTGA 540  
 Qy 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200  
 Db 541 ATGGAAGCGGTGGTATCTACGGCGTCTGCGAGATTTGGCGGAAAGCCCTGACCATC 600  
 Qy 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220  
 Db 601 TGCACCGTATCTGACCATCGCACTCGCACTCAGAGCAGACACCTGCGCTGAGCGTCAG 660  
 Qy 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239  
 Db 661 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 717

## RESULT 4

ECOPNP  
 LOCUS 1249 bp DNA linear BCT 26-APR-1993  
 DEFINITION E.coli purine nucleoside phosphorylase (deob) gene, complete cds.  
 ACCESSION M60917  
 VERSION M60917.1 GI:147308  
 KEYWORDS purine nucleoside phosphorylase.  
 SOURCE Escherichia coli  
 ORGANISM Escherichia coli

REFERENCE 1 (bases 1 to 1249)  
 AUTHORS Hersfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A.  
 and Short,S.A.  
 TITLE Use of site-directed mutagenesis to enhance the epitope-shielding  
 effect of covalent modification of proteins with polyethylene  
 glycol  
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)  
 MEDLINE 91334430

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PUBMED 1714590
COMMENT Original source text: Escherichia coli (strain K-12) DNA.
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            /notes="putative"
            /function="terminator for deoD transcription"

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        Length: 1249
        Score: 1222.00
        Matches: 238
        Percent Similarity: 100.00%
        Conservative: 1
        Best Local Similarity: 99.58%
        Mismatches: 0
        Query Match: 99.76%
        Indels: 0
        DB: 1
        Gaps: 0

US-10-035-300A-2 (1-239) x ECOPNP (1-1249)

QY 1 MetAlaThProHisIleAsnAlaGluMetGlyAspPheAlaAspValValleuMetPro 20
Db 123 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTGGTGC 182
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 183 GCGACCCCGCTGCTGCGAAGTATATGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 242
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 243 AACAGTTTCGCGTATGCTGGCTTCACCGTACTTACAGGCCGCGAAATTTCCGTA 302
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
Db 303 ATGGGTCACGGTATGGGTATCCGTCCTGCTCCATCTACACCAAGAACTGATCACCGAT 362
QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValleuProHisValLys 100
Db 363 TTCGGCGTGAAGAAATATTCGCGTGGGTCTCTGTGGCGAGTTCTGGCGCACGTAATA 422
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
Db 423 CTGCGCGACGTCGTATCGGTATGGGTGGCTGCGACCGATTCACAGTTAACCGCATCCGT 482
QY 121 PheLysAspHisAspPheAlaIleAlaAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 483 TTTAAAGACCATGACTTTCGCGTATCGCTACTTCGACATCGCATGGTGGTAAACGACATAG 542
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
Db 543 GCAGCTTAAGCACTGGGTATGATGCTGCGTGGGTAACTGTTCTCCGCTGACCTGTTC 602

RESULT 5
BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 12 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
FN JP 2002533126-A/12
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: udp and deod cloned into CC
PGM746
CC without upstream ptac promoter
FH key Location/Qualifiers
FT source 1..3031
FT /organism='Artificial Sequence'.
FEATURES
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        1..3031
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ORIGIN
Alignment Scores:
Pred. No.: 1..38e-109 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x BD261823 (1-3031)

QY 1 MetAlaThProHisIleAsnAlaGluMetGlyAspPheAlaAspValValleuMetPro 20
Db 101 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTGGTGC 160
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 161 GCGACCCCGCTGCTGCGAAGTATATGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 220
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QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 221 AACAAAGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 280

QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 281 ATGGGTACCGGTATGGGTATCCGCTCTGCTCACTACCAAGAACTGATCACCGAT 340

QY 81 PheGlyValLysLysIleleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 341 TTCGGCGTGAAGAAATTTATCCGCGGTCTGCTGGCGCAGTTCCTGCGCAGCTAAA 400

QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 401 CTGCGCGAGCTGTTATCGGTATGGGTGCTCGCCGATTCCAAAGTTAAACCGCATCCG 460

QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 461 TTTAAAGACCATGACTTTGCGCGTATCGCTGACTTCGACATCGGTGGTAACGCGATAG 520

QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 521 GCAGCTAAGCACCTGGGTATTCATGCTCGCGTGGGTAAACCTTCTCCGCTGACCTGTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 581 TACTCTCCGACGCGCAAAATGTCGACGTGATGGAAATACGGCATTTCTCGCGCTGGAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLeuThrIle 200
DB 641 ATGGAAGCGGTGGTATCTACGGCGTCTGCGAGAAATTTGGCGCAAGCCCTGACCATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 701 TGCACCGTATCTGACCATCCGACTCAGCAGACACCTGCGCGCTGAGCGTCAGACT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuGlyAspLysGlu 239
DB 761 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 817

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RESULT 6
AX027820 3031 bp DNA linear PAT 16-SEP-2000
LOCUS Sequence 12 from Patent WO0039307.
DEFINITION
ACCESSION AX027820
VERSION AX027820.1 GI:10188664
KEYWORDS
SOURCE synthetic construct
ORGANISM artificial sequences.

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REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORISINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
FEATURES
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        location/Qualifiers
            1..3031
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                ptac promoter"

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ORIGIN
Alignment Scores:
Pred. No.: 1.38e-109 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0

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DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027820 (1-3031)

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DB 101 ATGGGTACCCCAACACATTAATGCAGAAATGGCGATTTTCGCTGAGCTAGTTTTGTATGCCA 160

QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 161 GCGACACCGCTGCGTGGCAAGTATATTGCTGAAATTTTCCTTGAAGATGCCGCTGAAGTG 220

QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 221 AACAAAGTTTCGGGTATGCTGGCTTACCGGTACTTCAAAAGGCGCAAAATTTCCGTA 280

QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 281 ATGGGTACCGGTATGGGTATCCGCTCTGCTCATCTACCAAGAACTGATCACCGAT 340

QY 81 PheGlyValLysLysIleleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 341 TTCGGCGTGAAGAAATTTATCCGCGTGGGTCTGCTGGCGCAGTTCCTGCGCAGCTAAA 400

QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 401 CTGCGCGACGTCGTTATCGGTATGGGTGCTCGCCGATTCCAAAGTTAAACCGCATCCG 460

QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 461 TTTAAAGACCATGACTTTGCGCGTATCGCTGACTTCGACATCGGTGGTAACGCGATAG 520

QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 521 GCAGCTAAGCACCTGGGTATTCATGCTCGCGTGGGTAAACCTTCTCCGCTGACCTGTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 581 TACTCTCCGACGCGCAAAATGTCGACGTGATGGAAATACGGCATTTCTCGCGCTGGAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLeuThrIle 200
DB 641 ATGGAAGCGGTGGTATCTACGGCGTCTGCGAGAAATTTGGCGCAAGCCCTGACCATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 701 TGCACCGTATCTGACCATCCGACTCAGCAGACACCTGCGCGCTGAGCGTCAGACT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuGlyAspLysGlu 239
DB 761 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 817

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RESULT 7
BD261824 3128 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261824
VERSION BD261824.1 GI:33071592
KEYWORDS JP 2002533126-A/13.
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1 (bases 1 to 3128)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
COMMENT Patent: JP 2002533126-A 13 08-OCT-2002;
NORPHARMA SPA
OS Artificial Sequence
PN JP 2002533126-A/13
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198

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PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: deoD cloned downstream CC
prac promoter
FH Key Location/Qualifiers
FT source 1..3128
FT /organism="Artificial Sequence".
FEATURES
source
Location/Qualifiers
1..3128
/organism="synthetic construct"
/mol_type="genomic DNA"
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Alignment Scores: 1.44e-109 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 1222.00
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x BD261824 (1-3128)
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaAaGluVal 40
DB 258 GCGACCCCGTGGCGTGGAGATATATTCCTGGAACCTTCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACACGTTCCGGTATGCTGGGCTTACCGGTACTACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 378 ATGGGTACACGATGGGTATCCGCTCTCCATCTACACCAAGCAAACTGATCACCGAT 437
QY 81 PheGlyValLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCCGGCTGAAGAAATATCCCGTGGGTTCCTGTCGCGAGTCTCCGCGCACTAAATA 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGGCGACGTCGTTATCGGTATGGGTCCGTCACCGCATTCCAAAGTTAAACCGCATCCGT 557
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTAAAGACCATGACTTTGCGGCTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 618 GCAGCTAAACACTGGGTATGATGCTCGGTGGGTAACTGTTCTCCGCTGACCTGCTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGCAATGTTCCAGCTGATGAGAAATACGGCAATTCGCGGTGGAA 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGGAACGCGTGGTATCTACGCGGTGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrAlaAlaGluArgGlnThr 220
DB 798 TGCACCGTATCTGACCATCCGACTCAGGAGCAGACCATCGCGGTGAGCGGTGACACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
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DB 858 ACCTTCAACGACATGATCAAAATCGCAATCGGAATCGGTTCTGCTGGCGGATAAAGAG 914
RESULT 8
AX027821
LOCUS AX027821 3128 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 13 from Patent WO0039307.
ACCESSION AX027821
VERSION AX027821.1 GI:10188665
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE
1 Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
AUTHORS Recombinant bacterial strains for the production of natural
TITLE nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 13 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
Location/Qualifiers
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/notes="deoD cloned downstream prac promoter"
ORIGIN
Alignment Scores: 1.44e-109 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 1222.00
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027821 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 198 ATGGCTACCCACACATTAATGAGAAATGGCGGATTCGCTGACGTAGTTTGGATGCCA 257
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaAaGluVal 40
DB 258 GCGACCCCGTGGCGTGGAGATATATTCCTGGAACCTTCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACACGTTCCGGTATGCTGGGCTTACCGGTACTACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 378 ATGGGTACACGATGGGTATCCGCTCTCCATCTACACCAAGCAAACTGATCACCGAT 437
QY 81 PheGlyValLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCCGGCTGAAGAAATATCCCGTGGGTTCCTGTCGCGAGTCTCCGCGCACTAAATA 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGGCGACGTCGTTATCGGTATGGGTCCGTCACCGCATTCCAAAGTTAAACCGCATCCGT 557
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTAAAGACCATGACTTTGCGGCTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 618 GCAGCTAAACACTGGGTATGATGCTCGGTGGGTAACTGTTCTCCGCTGACCTGCTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGCAATGTTCCAGCTGATGAGAAATACGGCAATTCGCGGTGGAA 737
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QY 181 MetGluAlaAlaGlyTleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 738 ATGGAGCGGCTGGTATCTACCGCGTCGCTGAGAAATTTGGCGCGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 798 TGCACCGTATCTGACCATCCGACTACAGAGCAGACCATCGCGCTGAGCGTCAACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 858 ACCTTCAAGACATGATCAAAATCGCACTGGAATCGTCTCTGCGCGCATAAAGAG 914

RESULT 9
LOCUS BD261814 3383 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
ACCESSION BD261814
KEYWORDS BD261814.1 GI:33071582
SOURCE JP 2002533126-A/3.
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 3383)
AUTHORS Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
NORPHARMA SPA
COMMENT Patent: JP 2002533126-A 3 08-OCT-2002;
OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N15/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
CC deoD
FH Key Location/Qualifiers
FT gene (231)..(960).

FEATURES
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/organism="synthetic construct"
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Alignment Scores:
Pred. No.: 1.59e-109 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-2 (1-239) x BD261814 (1-3383)

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Db 240 ATGGTACCCACACATTAATGCAAGAAATGGCGATTCGCTGAGTATTTGATGCCA 299
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 300 GCGACCGCGCTGCGGAGTATATCTGAACTTTCCTTGAAGATGCCGCGAAGTG 359
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 360 AACACGTTTCGGGTATCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 419
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80

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Db 420 ATGGGTCAAGTATGGTATCCGCTCTCATCTACCAAAAGACTGATCACCGAT 479
QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyValAlaValLeuProHisValLys 100
Db 480 TTCGGCGTGAAGAAATTAATCCGCGTGGTTCCTGTGGCGCAGTTCTGCCGACGTAATA 539
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
Db 540 CTGCGCGACGTCGTTATCGGTATGGTGCCTCACCAGATTCCAAAGTTAACCCGATCCGT 599
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 600 TTTAAAGACCATGACTTTGCCGCTATCGCTGATCTCGACATCGTGCCTAAGCAGTAGAT 659
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
Db 660 GCAGCTAAAGCACTGGGTATGATCTCGGTTGGGTAACTGTTCTCCGCTGACCTGTTTC 719
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
Db 720 TACTCTCCGACGCGGAAATGTTCCAGCTGATGGAATAATACGGCATTCCTCGCGGTGAA 779
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 780 ATGGAAGCGGCTGGTATCTACGGCTCGCTGCAGAAATTTGGCGCGAAAGCCCTGACCATC 839
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 840 TGCACCGTATCTGACCATCCGCACTCAGAGACAGACCTGCGCTGAGCGTCAACT 899
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
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RESULT 10
LOCUS AX027811 3383 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 3 from Patent WO0039307.
ACCESSION AX027811
VERSION AX027811.1 GI:10188655
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
Patent: WO 0039307-A 3 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
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/db_xref="taxon:32630"
/note="Plasmid"

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Pred. No.: 1.59e-109 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-2 (1-239) x AX027811 (1-3383)

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DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: WO 0039307-A 14 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARVA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
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Pred. No.: 1,92e-109 Length: 3934
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027822 (1-3934)
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 258 GCGCAGCGCTGCTGCGAAGTATATTGCTGAACCTTTCTTGAAGATGCGCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 318 AACACAGTTTCGGGTATGCTGGCTTACCCGGTACTTACAAAGGCGCAAAATTTCCGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
Db 378 ATGGGTACGGTATGGGTATCCGTCCTGCTCATCTACCAAGAACTGATCACCAGAT 437
QY 81 PheGlyValLysLysIleAlaArgValGlySerCysGlyAlaValLeuProHisValLys 100
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QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
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QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
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QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
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DEFINITION Recombinant bacterial strains for the production of natural
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ACCESSION BD261816
VERSION BD261816.1 GI:33071584
KEYWORDS JP 2002533126-A/5,
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 4189)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 5 08-OCT-2002;
COMMENT NORPHARVA SPA
OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 1166 AACACAGTTTCGGGTATGCTGGCTTACCCGGTACTTACAAAGGCGCAAAATTTCCGTA 1225
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QY      101  LeuArgAspValIleGlyMetGlyAlaCysThrAspSerIysValAsnArgIleArg 120
Db      1346  CTGCGCGAGCTCGTTATCGGTATGGGTGCTGCGACCGATTCCAAAGTTAACCGCATCCGT 1405
QY      121  PheIysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db      1406  TTTAAAGACCATGACTTTCGCGTATGATCGTGGGTAACTGTTCTCCGCTGACCTGTTTC 1465
QY      141  AlaAlaIysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
Db      1466  GCAGCTAAAGCACTGGGTATGATCGTGGGTAACTGTTCTCCGCTGACCTGTTTC 1525
QY      161  TyrSerProAspGlyGluMetPheAspValMetGluIysTyrGlyIleLeuGlyValGlu 180
Db      1526  TACTCTCCGACGCGGAAATGTTGACGCTGATCGGAAATACGGCATTTCTCGCGGTGGAA 1585
QY      181  MetGluAlaIleGlyIleTyrGlyValAlaAlaGluPheGlyAlaIysAlaLeuThrIle 200
Db      1586  ATGGAAGCGCTGATCTACGGCGTCTGCGAATTTGGCGGAAAGCCCTGACCATC 1645
QY      201  CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db      1646  TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGCGTGAGCGTCAGACT 1705
QY      221  ThrPheAsnAspMetIleIysIleAlaLeuGluSerValLeuLeuGlyAspIysGlu 239
Db      1706  ACCTTCAACGACATGATCAAAATGCGACTCGGATCCGTTCTGCTGGCGGATAAAG 1762

RESULT 14
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DEFINITION Sequence 5 from Patent W00039307.
ACCESSION  AX027813
VERSION     AX027813.1  GI:10188657
KEYWORDS   synthetic construct
SOURCE     synthetic construct
ORGANISM   artificial sequences.

REFERENCE  1
AUTHORS   Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE     Recombinant bacterial strains for the production of natural
          nucleosides and modified analogues thereof
JOURNAL   Patent: WO 0039307-A 5 06-JUL-2000;
          BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
          ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
          GHISOTTI DANIELA (IT)
FEATURES   LOCATION/Qualifiers
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Pred. No.:      2,08e-109      Length:      4189
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Percent Similarity: 100.00%      Conservative: 1
Best Local Similarity: 99.58%      Mismatches: 0
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QY      61  MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrIysGluLeuIleThrAsp 80
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QY      101  LeuArgAspValIlelleGlyMetGlyAlaCysThrAspSerIysValAsnArgIleArg 120
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QY      181  MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaIysAlaLeuThrIle 200
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QY      221  ThrPheAsnAspMetIleIysIleAlaLeuGluSerValLeuLeuGlyAspIysGlu 239
Db      1706  ACCTTCAACGACATGATCAAAATGCGACTCGGATCCGTTCTGCTGGCGGATAAAG 1762

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DEFINITION Sequence 5 from patent US 6491905.
ACCESSION  AR264513
VERSION     AR264513.1  GI:29692752
KEYWORDS   Unknown.
SOURCE     Unknown.
ORGANISM   Unclassified.
REFERENCE  1 (bases 1 to 5013)
AUTHORS   Sorscher,E.J., Parker,W.B., Waud,W., Gadi,V.K. and Bennett,L.L. Jr.
TITLE     Recombinant bacterial cells for delivery of FMP to tumor cells
JOURNAL   Patent: US 6491905-A 5 10-DEC-2002;
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QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
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QY 773 TTTAAGACCATGACTTTGCCGCTATCGCTGACTTCGACATGGTGCATAACGCAGTAGAT 832
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QY 833 GCAGCTAAAGCACTCGGTATTGATGCTCGCGTGGGTAACTGTTCTCCGCTGACCTGTTT 892
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GenCore version 5.1.6  
Copyright (c) 1993 - 2004 Compugen Ltd.

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and is derived by analysis of the total score distribution.

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ALIGNMENTS

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LOCUS AX087917  
DEFINITION Sequence 3 from Patent WO0114566.  
ACCESSION AX087917  
VERSION AX087917.1 GI:13396895  
KEYWORDS  
SOURCE Escherichia coli  
ORGANISM Escherichia coli  
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;  
Enterobacteriaceae; Escherichia.  
REFERENCE 1  
Tischer, W., Ihlenfeldt, H.G., Barzu, O., Sakamoto, H., Pistotnik, E.,  
Marliere, P. and Pochet, S.  
AUTHORS  
TITLE Enzymatic synthesis of deoxyribonucleosides

JOURNAL Patent: WO 0114566-A 3 01-MAR-2001;  
Roche Diagnostics GmbH (DE) ; INSTITUT PASTEUR (FR) ; Pharma-  
Waldhof GmbH & Co. KG (DE)  
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Query Match 99.8%; Score 718.4; DB 6; Length 720;  
Best Local Similarity 99.9%; Pred. No. 1.3e-180;  
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
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LOCUS AX590437 720 bp DNA linear PAT 27-JAN-2003  
DEFINITION Sequence 3 from Patent EP1254959.  
ACCESSION AX590437  
VERSION AX590437.1 GI:27949070  
KEYWORDS  
SOURCE Escherichia coli  
ORGANISM Escherichia coli  
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;  
Enterobacteriaceae; Escherichia.  
REFERENCE 1  
AUTHORS Araki, T., Ikeda, I., Matoishi, K., Abe, R., Oikawa, T., Matsuba, Y.,  
Ishibashi, H., Naganara, K. and Fukui, Y.  
TITLE Method for producing cytosine nucleoside compounds  
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;  
MITSUI CHEMICALS, INC. (JP)  
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Best Local Similarity 99.9%; Pred. No. 1.3e-180;  
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LOCUS BD187724 720 bp DNA linear PAT 17-JUL-2003
DEFINITION A method of producing a cytosine nucleoside compound.
ACCESSION BD187724
VERSION BD187724.1 GI:32997463
KEYWORDS JP 2003018997-A/3.
SOURCE Escherichia coli
ORGANISM Escherichia coli

REFERENCE
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Nagahara,K., Fukui,Y. and Ishibashi,H.
TITLE A method of producing a cytosine nucleoside compound
JOURNAL PATENT: JP 2003018997-A 3 21-JAN-2003;
MITSUI CHEMICALS INC
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PN JP 2003018997-A/3
PD 21-JAN-2003
PF 01-MAY-2002 JP 2002129867
PI TADASHI ARAKI, ICHIRO IKEDA, KAORI MATOISHI, REIKO ABE, TOSHIHIRO
PI OIKAWA,
PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUIRI, HIROKI PI
ISHIBASHI
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Query Match 99.8%; Score 718.4; DB 6; Length 720;
Best Local Similarity 99.9%; Pred. No. 1.3e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ATGGCTACCCACACATTAATGCAGAAATGGCGATTTCGCTGACGTAGTTTGTATGCCA 60
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RESULT 4
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LOCUS E.coli purine nucleoside phosphorylase (deoD) gene, complete cds.
DEFINITION M60917
ACCESSION M60917
VERSION M60917.1 GI:147308
KEYWORDS purine nucleoside phosphorylase.
SOURCE Escherichia coli
ORGANISM Escherichia coli

REFERENCE
AUTHORS Hersfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A. and Short,S.A.
TITLE Use of site-directed mutagenesis to enhance the epitope-shielding effect of covalent modification of proteins with polyethylene glycol
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)
MEDLINE 91334430
PUBMED 1714590
COMMENT Original source text: Escherichia coli (strain K-12) DNA.
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RESULT 5
BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 12 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence

PN JP 2002533126-A/12
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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pgm746
CC without upstream ptac promoter
FH Key Location/Qualifiers
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Query Match          99.8%; Score 718.4; DB 6; Length 3031;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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RESULT 6
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DEFINITION Sequence 12 from Patent WO0039307.
ACCESSION AX027820
VERSION AX027820.1 GI:10188664
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
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REFERENCE Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
AUTHORS Recombinant bacterial strains for the production of natural
TITLE nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 12 06-JUL-2000;
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ptac promoter"
ORIGIN
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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RESULT 7
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LOCUS BD261824 3128 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
ACCESSION nucleosides and modified analogues thereof.
VERSION BD261824
KEYWORDS BD261824.1 GI:33071592
SOURCE JP 2002533126-A/13.
ORGANISM synthetic construct
artificial sequences.
1 (bases 1 to 3128)
REFERENCE Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
AUTHORS Recombinant bacterial strains for the production of natural
TITLE nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 13 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
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PD 08-OCT-2002
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PR 23-DEC-1998 IT MI 98A002792
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ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10/C12P19/38,C12P19/40,C12N15/00 CC
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 121 AACAAAGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 180
DB 318 AACAAAGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGGCGCAAAATTTCCGTA 377
QY 181 ATGGGTACCGGTATGGGTATCCCGTCTGCTCCATCTACACAAAGAACTGATCACCGAT 240
DB 378 ATGGGTACCGGTATGGGTATCCCGTCTGCTCCATCTACACAAAGAACTGATCACCGAT 437
QY 241 TTCCGCGTGAAGAAATTAATCCGCTGGGTTCTGTGGCGAGTTCTGCGCACGTAAAAA 300
DB 438 TTCCGCGTGAAGAAATTAATCCGCTGGGTTCTGTGGCGAGTTCTGCGCACGTAAAAA 497
QY 301 CTGCGGACGCTGGTATCGGTATGGGTGCTGACCGATTCCAAAGTTTAAACCGCATCCGT 360
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361 TTTAAAGACCATGACTTTGCGGTATCGCTGACTTCGACATGCTGGTAAACGAGTAGAT 420
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421 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGTTGACCTGTTC 480
618 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGTTGACCTGTTC 677
481 TACTCTCCGAGCGGCGAAATGTTGCGAGTGAATGCGAAATATCGGCAATTTCCGCGTGGAA 540
678 TACTCTCCGAGCGGCGAAATGTTGCGAGTGAATGCGGCAATTTCCGCGTGGAA 737
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738 ATGGAAGCGGCTGGTATCTACGCGTGGTGAAGATTTGGCGGGAAGCCCTGACCATC 797
601 TGCACCGTATCTGACCATCCGCACTCAGCAGCAGACCACTGCGCGTGAAGCTCAGACT 660
798 TGCACCGTATCTGACCATCCGCACTCAGCAGCAGACCACTGCGCGTGAAGCTCAGACT 857
661 ACCTTCAACGACATGATCAAAATCGCACTGGAATCGGTTCTGCTGGCGGATAAAGATTA 720
858 ACCTTCAACGACATGATCAAAATCGCACTGGAATCGGTTCTGCTGGCGGATAAAGATTA 917

RESULT 8
AX027821
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
REFERENCE
AUTHORS
TITLE
JOURNAL
ORIGIN
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/organism="synthetic construct"
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Query Match 99.8%; Score 718.4; DB 6; Length 3128;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1 ATGCTACCCACACATTAATGCGAATGGCGAATTCGCTGAGTAGTTTCATGCCA 60
198 ATGGCTACCCACACATTAATGCGAATGGCGAATTCGCTGAGTAGTTTCATGCCA 257
61 GGCGACCGCTGCTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCCGTGAAGTG 120
258 GGCGACCGCTGCTGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCCGTGAAGTG 317
121 AACCAAGCTTCGCGGTATGCTGGGTTTACCAGTACTTACAAAGCCGCAAAATTTCCGTA 180
318 AACCAAGCTTCGCGGTATGCTGGGTTTACCAGTACTTACAAAGCCGCAAAATTTCCGTA 377
181 ATGGGTACCGGTATGCTGGGTTTACCAGTACTTACAAAGCCGCAAAATTTCCGTA 240
378 ATGGGTACCGGTATGCTGGGTTTACCAGTACTTACAAAGCCGCAAAATTTCCGTA 437
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438 TTGCGGTGAAGAAAATTTATCCGCTGGGTTCCTGTGGCGAGTTCTGCCGCAAGTAAA 497
301 CTGCGCGAGCTGTTATCGGTATGGGTGCTGCGACCGATTCCAAAGTTAAACGCAATCCGT 360
498 CTGCGCGAGCTGTTATCGGTATGGGTGCTGCGACCGATTCCAAAGTTAAACGCAATCCGT 557
361 TTTAAAGACCATGACTTTGCGGTATCGCTGACTTCGACATGCTGGTAAACGAGTAGAT 420
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421 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGTTGACCTGTTC 480
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481 TACTCTCCGAGCGGCGAAATGTTGCGAGTGAATGCGGCAATTTCCGCGTGGAA 540
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541 ATGGAAGCGGCTGGTATCTACGCGTGGTGAAGATTTGGCGGGAAGCCCTGACCATC 600
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601 TGCACCGTATCTGACCATCCGCACTCAGCAGCAGACCACTGCGCGTGAAGCTCAGACT 660
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RESULT 9
BD261814
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
ORIGIN
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1. .3383
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"

Query Match 99.8%; Score 718.4; DB 6; Length 3383;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

BD261814
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
BD261814
1 GI:33071582
UP 2002533126-A/3.
synthetic construct
artificial sequences.
1 (bases 1 to 3383)
Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: JP 2002533126-A 3 08-OCT-2002;
NORPHARMA SPA
OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09 C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
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Db |||
QY 61 GCGACACCGCTGCGTGGCAAGATATATGCTGAAAATTTCTTCTTGAAGATGCCCGTGAAGTG 120
Db |||
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Db |||
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Db |||
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Db |||
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Db |||
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Db |||
QY 540 CTGCGGACGCTGCTTATCGGTATGGGTATCCGTTACCGGTATCTTACAAAGGCGCAAAATTTCCGTA 599
Db |||
QY 361 TTAAAGACCATGACTTTGCGGCTATCGGTATGGGTATCCGTTACCGGTATCTTACAAAGGCGCAAAATTTCCGTA 420
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QY 600 TTAAAGACCATGACTTTGCGGCTATCGGTATGGGTATCCGTTACCGGTATCTTACAAAGGCGCAAAATTTCCGTA 659
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RESULT 10
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DEFINITION Sequence 3 from Patent WO0039307.
ACCESSION AX027811
VERSION AX027811.1 GI:10188655
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: WO 0039307-A 3 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
Location/Qualifiers
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Query Match 99.8%; Score 718.4; DB 6; Length 3383;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 ATGGCTACCCACACATTAATGCGAAGATGGCGATTTCGCTGACGTAGTTTTGATGCCA 60
Db |||
QY 240 ATGGCTACCCACACATTAATGCGAAGATGGCGATTTCGCTGACGTAGTTTTGATGCCA 299
Db |||
QY 61 GCGACACCGCTGCGTGGCAAGATATATGCTGAAAATTTCTTCTTGAAGATGCCCGTGAAGTG 120
Db |||
QY 300 GCGACACCGCTGCGTGGCAAGATATATGCTGAAAATTTCTTCTTGAAGATGCCCGTGAAGTG 359
Db |||
QY 121 AACAAAGTTGCGGTATGCTGGCTTACCCGTTACCGGTATCTTACAAAGGCGCAAAATTTCCGTA 180
Db |||
QY 360 AACAAAGTTGCGGTATGCTGGCTTACCCGTTACCGGTATCTTACAAAGGCGCAAAATTTCCGTA 419
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Db |||
QY 840 TGCACCGGTATCTGACCATCGGCTGCTGAGTAACTGCTTCCGTTGACCTGTTTC 899
Db |||
QY 661 ACCTTCAACGACATGATCAAAATCGCATCGGCTGCTGAGTAACTGCTTCCGTTGACCTGTTTC 720
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RESULT 11
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DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261825
VERSION BD261825.1 GI:33071593
KEYWORDS JP 2002533126-A/14.
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 3934)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: JP 2002533126-A 14 08-OCT-2002;
NORPHARMA SPA
OS Artificial Sequence
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PN JP 2002533126-A/14
PD 08-OCT-2002
PP 23-DEC-1999 JP 20005911198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
  ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10, /C12P19/38, C12P19/40, C12N15/00 CC
  Description of Artificial Sequence: udp and deod cloned CC
  downstream ptac
CC promoter
PH Key
PI source
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    Query Match 99.8%; Score 718.4; DB 6; Length 3934;
    Best Local Similarity 99.9%; Pred. No. 1.5e-180;
    Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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  258 GGGCAGCCCGTGGTGGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGCTGAAGTG 317
  121 AACAAAGTTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
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  618 GCAGCTAAAGCACTGGGTATGATGCTGCGGTGGTAAACCTGTTCTCCGTGACCTGTTTC 677
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  798 TGCAACCGTATCTGACACATCCGCACTCAAGAGATGCTGCTGCTGCTGCTGCTGCTGCTGCT 857
  661 ACCTTCAACGATGATCAAAATTCGCACTGGATCCGTTCTGCTGCTGCTGCTGCTGCTGCTGCT 720
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LOCUS 3934 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
KEYWORDS
SOURCE synthetic construct
ORGANISM synthetic construct
          artificial sequences.
REFERENCE
  1 Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
    Recombinant bacterial strains for the production of natural
    nucleosides and modified analogues thereof
    Patent: WO 0039307-A 14 06-JUL-2000;
    BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
    ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
    GHISOTTI DANIELA (IT)
  Location/Qualifiers
  1. .3934
  /organism="synthetic construct"
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  /db_xref="taxon:32630"
  /note="udp and deod cloned downstream ptac promoter"
ORIGIN
  Query Match 99.8%; Score 718.4; DB 6; Length 3934;
  Best Local Similarity 99.9%; Pred. No. 1.5e-180;
  Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
  1 ATGGCTACCCACACATTAATGAGAAATGGGCGATTTCGCTGACGCTAGTTTGTGCGCA 60
  198 ATGGCTACCCACACATTAATGAGAAATGGGCGATTTCGCTGACGCTAGTTTGTGCGCA 257
  61 GGGCAGCCCGTGGTGGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGCTGAAGTG 120
  258 GGGCAGCCCGTGGTGGCGAAGTATATTGCTGAAACTTTCTTGAAGATGCCGCTGAAGTG 317
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LOCUS   BD261816               4189 bp    DNA    linear    PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
            nucleosides and modified analogues thereof.
ACCESSION BD261816
VERSION   BD261816.1 GI:33071584
KEYWORDS  JP 2002533126-A/5.
SOURCE    synthetic construct
ORGANISM  artificial construct
            1 (bases 1 to 4189)
REFERENCE Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
AUTHORS   Recombinant bacterial strains for the production of natural
TITLE     nucleosides and modified analogues thereof
JOURNAL   Patent: JP 2002533126-A 5 08-OCT-2002;
            NORPHARMA SPA
COMMENT   OS Artificial Sequence
            PN JP 2002533126-A/5
            PD 08-OCT-2002
            PF 23-DEC-1999 JP 2000591198
            PR 23-DEC-1998 IT MI 98A002792
            PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
            ORSINI,
            PI GIANCARLO TONON GABRIELE ZUFFI
            PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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FEATURES
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ORIGIN
Query Match 99.8%; Score 718.4; DB 6; Length 4189;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY      61  GCGGACCCGCTGCGTGCAGATATATCTGAAACTTTCTTGAAGATGCCGTGAAGTG 120
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Db      1586 ATGGAAGCGGCTGGTATCTACGGCGTCTGTCAGAAATTTGGCGCGAAACCCCTGACCATC 1645
QY      601  TGCACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCCGCTGAGCGTCAGACT 660
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QY      661  ACCTTCAACGACATGATCAAAATCGCACTGGAAATCGTTCTGCTGGCGGATAAAGAGTAA 720
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RESULT 14
AX027813
LOCUS   AX027813               4189 bp    DNA    linear    PAT 16-SEP-2000
DEFINITION Sequence 5 from Patent WO0039307.
ACCESSION AX027813
VERSION   AX027813.1 GI:10188657
KEYWORDS  synthetic construct
SOURCE    synthetic construct
ORGANISM  artificial sequences
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REFERENCE Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
AUTHORS   Recombinant bacterial strains for the production of natural
TITLE     nucleosides and modified analogues thereof
JOURNAL   Patent: WO 0039307-A 5-06-JUL-2000;
            BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
            ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY      121 AACACGTTGCGGATGCTGGGCTTCACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
Db      1166 AACACGTTGCGGATGCTGGGCTTCACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 1225
QY      181 ATGGGTACGGTATGGGTATCCCGTCTGCTCCATCTACACAAAGAACTGATCAACCGAT 240
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GenCore version 5.1.6  
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - nucleic search, using frame\_plus\_p2n model

Run on: June 8, 2004, 03:05:11 ; Search time 2814 Seconds  
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Searched: 3470272 seqs, 21671516995 residues  
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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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2	1222	99.7	720	6	AX590437	Sequence
3	1222	99.7	720	6	BD187724	A method
4	1222	99.7	1249	1	ECOPNP	M60917 E.coli puri
5	1222	99.7	3031	6	BD261823	Recombina
6	1222	99.7	3031	6	AX027820	Sequence
7	1222	99.7	3128	6	BD261824	Recombina
8	1222	99.7	3128	6	AX027821	Sequence
9	1222	99.7	3383	6	BD261814	Recombina
10	1222	99.7	3383	6	AX027811	Sequence
11	1222	99.7	3934	6	BD261825	Recombina
12	1222	99.7	3934	6	AX027822	Sequence
13	1222	99.7	4189	6	BD261816	Recombina
14	1222	99.7	4189	6	AX027813	Sequence
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17	1222	99.7	5241	6	AX027815	Sequence
18	1222	99.7	5495	6	BD261815	Recombina
19	1222	99.7	5495	6	AX027812	Sequence
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21	1222	99.7	6046	6	AX027823	Sequence
22	1222	99.7	6269	6	BD261820	Recombina
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35	1221	99.6	86898	1	AE016772	Escherich
36	1221	99.6	225944	1	AE016993	Shigella
37	1213	98.9	720	6	AX087929	Sequence
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## ALIGNMENTS

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LOCUS AX087917 720 bp DNA linear PAT 17-MAR-2001  
DEFINITION Sequence 3 from Patent WO0114566.  
ACCESSION AX087917  
VERSION AX087917.1 GI:13396895  
KEYWORDS Escherichia coli  
SOURCE Escherichia coli  
ORGANISM Escherichia coli  
REFERENCE 1  
AUTHORS Tischer, W., Ihlenfeldt, H.G., Barzu, O., Sakamoto, H., Pistotnik, E.,  
Marliere, P., and Pochet, S.  
Enzymatic synthesis of deoxyribonucleosides  
Patent: WO 0114566-A 3 01-MAR-2001;  
Roche Diagnostics GmbH (DE); INSTITUT PASTEUR (FR); Pharma-  
Waldhof GmbH & Co. KG (DE)  
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QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120  
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LOCUS AX590437 720 bp DNA linear PAT 27-JAN-2003  
DEFINITION Sequence 3 from Patent EP1254959.  
ACCESSION AX590437  
VERSION AX590437.1 GI:27949070  
KEYWORDS Escherichia coli  
SOURCE Escherichia coli  
ORGANISM Escherichia coli  
REFERENCE 1  
AUTHORS Araki, T., Ikeda, I., Matoishi, K., Abe, R., Oikawa, T., Matsuba, Y.,  
Ishibashi, H., Nagahara, K. and Fukui, Y.  
Method for producing cytosine nucleoside compounds  
Patent: EP 1254959-A 3 06-NOV-2002;  
MITSUI CHEMICALS, INC. (JP)  
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Score: 1222.00 Matches: 238  
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## RESULT 3

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 LOCUS  
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 BD187724  
 ACCESSION  
 VERSION BD187724.1 GI:32997463  
 KEYWORDS JP 2003018997-A/3.  
 SOURCE Escherichia coli  
 ORGANISM Escherichia coli

REFERENCE Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.  
 1 (bases 1 to 720)

Araki, T., Ikeda, I., Matoishi, K., Abe, R., Oikawa, T., Matsuba, Y.,

Nagahara, K., Fukui, Y. and Ishibashi, H.

A method of producing a cytosine nucleoside compound

Patent: JP 2003018997-A 3 21-JAN-2003;

MITSUMI CHEMICALS INC

OS Escherichia coli

PN JP 2003018997-A/3

PD 21-JAN-2003

PF 01-MAY-2002 JP 2002129867

PI TADASHI ARAKI, ICHIRO IKEDA, KAORI MATOISHI, REIKO ABE, TOSHIHIRO

PI OIKAWA,

PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUI, HIROKI PI

ISHIBASHI

PC C12N1/09, C12N1/15, C12N1/19, C12N1/21, C12N5/10, C12N9/10 PC

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CC A method of producing a cytosine nucleoside compound FH Key

Location/Qualifiers

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FT Location/Qualifiers

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Query Match: 99.67%

DB: 6

Mismatches: 1

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## RESULT 4

ECOPNP

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

MEDLINE

E.coli purine nucleoside phosphorylase (deod) gene, complete cds.  
 M60917.1 GI:147308  
 purine nucleoside phosphorylase.  
 Escherichia coli  
 Escherichia coli  
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;  
 Enterobacteriaceae; Escherichia.  
 1 (bases 1 to 1249)  
 Hersfield, M.S., Chaffee, S., Koro-Johnson, L., Mary, A., Smith, A.A.  
 and Short, S.A.  
 Use of site-directed mutagenesis to enhance the epitope-shielding  
 effect of covalent modification of proteins with polyethylene  
 glycol  
 Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)  
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Alignment Scores:
Pred. No.: 2..27e-111 Length: 1249
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 1 Gaps: 0

US-10-035-300A-4 (1-239) x ECPNP (1-1249)

QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 123 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 182
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 183 GCGACCCGCTGCGTGGCAAGTATATTGCTGAAACTTTTCTTGAAGATGCCCGTGAAGTG 242
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 243 AACACGCTTCGCGTATGCTGGGGTTCACCGGTACTTACAAAGCCGCAAAATTCGTA 302
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 303 ATGGGTACGGTATGGGTATCCCGTCTGCTCCATCTACACAAAGAACTGATCACCGAT 362
QY 81 PheGlyValLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 363 TTCGCGGTGAAGAAAATATCCGCTGGGTTCCTGTGGCGCAGTTCTGCCACGTAATAA 422
QY 101 LeuArgAspValValIleGlyMetGlyValaCysThrAspSerLysValAsnArgIleArg 120
DB 423 CTGGCGGACGTCGTTATCGGTATGGTGCCCTGACCGATTCCAAGTTAACCGCATCGT 482
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 483 TTTAAGACCATGACTTTTCCCGCTATCGCTGACTTCGACATGGTTCGCTAACCGCATGAT 542
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 543 GCAGCTAAGACATGGGTATTGATGCTCGCGTGGGTAAACCTGTTCTCCGCTGACCTGTTC 602

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QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyTleLeuGlyValGlu 180
DB 603 TACTCTCCGGACGGCGAAATGTTCCAGCTGATGAAAAATACGGCAATTCCTCGCGTGGAA 662
QY 181 MetGluAlaAlaGlyTleTyrGlyValAlaAlaGluPheGlyValAlaLysAlaLeuThrIle 200
DB 663 ATGGAAGCGGCTGGTATCTACGGCGTCTGAGAAATTTGGCGGAAAGCCCTGACCAATC 722
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 723 TGCACCGTATCTGACCAATCCGCACTCAGGACACACCACTGCCGCTGAGCGTCAAGACT 782
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
DB 783 ACCTTCAACGACATGATCAAAATCGCACTGGAATCGGTTCTGCTGGCGGATAAAGAG 839

RESULT 5
BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
Patent: JP 2002533126-A 12 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/12
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
ORSINI.
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
Description of Artificial Sequence: udp and deod cloned into CC
PGM746
CC without upstream ptac promoter
FH Key Location/Qualifiers
FT source 1..3031
FT /organism='Artificial Sequence'.
FEATURES
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        1..3031
            Location/Qualifiers
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ORIGIN
Alignment Scores:
Pred. No.: 6.96e-111 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-4 (1-239) x BD261823 (1-3031)

QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 101 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 160
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 161 GCGACCCGCTGCGTGGCAAGTATATTGCTGAAACTTTTCTTGAAGATGCCCGTGAAGTG 220

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Qy 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 221 AACAAAGTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGGCCGCAAAATTTCCGTA 280

Qy 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
Db 281 ATGGGTACACGGTATGGGTATCCCTCCCTGCTCCATCTACACCAAGAACTGATCACCAGT 340

Qy 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
Db 341 TTCGGCGTGAAGAAATATCCGCGTGGGTTCCTGTGCGCAGTTCTGCGCAGCTAAAA 400

Qy 101 LeuArgAspValValIleGlyMetGlyValAlaCysThrAspSerLysValAsnArgIleArg 120
Db 401 CTGCGGACGTCGTATTCGGTATGGGTGCTGCCTGACCCGATTCCAAAGTTAACCGCATCCGT 460

Qy 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 461 TTTAAAGACCATGACTTTGCGGCTATCGCTGACTTTCGACATGGTGCCTAACGCGTAGAT 520

Qy 141 AlaAlaLysAlaLeuGlyIleArgValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 160
Db 521 GCAGCTAAAGCACTGGGTATGTGATGCTCGCGTGGTAAACCTGTTCGCGTGAACCTGTT 580

Qy 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
Db 581 TACTCTCCGACGCGGAATGTTCCAGCTGATGGTAAATACCGCATTTCCGCGTGGAA 640

Qy 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 641 ATGGAAGCGCTGGTATCTACGCGCTGCTGCAGAAATTTGGCGCGAAGCCCTGACCAATC 700

Qy 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 701 TGCACCGTATCTGACCACTCCGCACTACGAGCAGACCACTCCGCTGAGCGTCAAGACT 760

Qy 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 761 ACCTTCAAGCATGATCAAAATCGCACITGGAAATCCGTTCTGCTGGGCGATAAAGAG 817

RESULT 6
AX027820
LOCUS
DEFINITION
Sequence 12 from Patent WO0039307.
ACCESSION
AX027820
VERSION
AX027820.1 GI:10188664
KEYWORDS
synthetic construct
SOURCE
synthetic construct
ORGANISM
artificial sequences.
REFERENCE
1.
AUTHORS
Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
TITLE
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL
Patent: WO 0039307-A 12 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GIANCARLO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
Location/Qualifiers
source
1..3031
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="udp and deoB cloned into pGM746 without upstream
ptac promoter"
ORIGIN
Alignment Scores:
Pred. No.: 6,96e-111 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0

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Gaps: 0

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Qy 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 161 GGCACCCGCTGGTGGCAAGTATTTGCTGAACATTTTCCTTGAAGATGCCCGTGAAGTG 220

Qy 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 221 AACAAAGTTCGCGGTATGGGTATCCGCTGCTGCCTGACCCGTTACAAAGGCCGCAAAATTTCCGTA 280

Qy 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
Db 281 ATGGGTACACGGTATGGGTATCCGCTGCTGCCTGACCCGATTCCAAAGTTAACCGCATCCGT 340

Qy 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
Db 341 TTCGGCGTGAAGAAATATCCGCGTGGGTTCCTGTGCGCAGTTCTGCGCAGCTAAAA 400

Qy 101 LeuArgAspValValIleGlyMetGlyValAlaCysThrAspSerLysValAsnArgIleArg 120
Db 401 CTGCGGACGTCGTATTCGGTATGGGTGCTGCCTGACCCGATTCCAAAGTTAACCGCATCCGT 460

Qy 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 461 TTTAAAGACCATGACTTTGCGGCTATCGCTGACTTTCGACATGGTGCCTAACGCGTAGAT 520

Qy 141 AlaAlaLysAlaLeuGlyIleArgValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 160
Db 521 GCAGCTAAAGCACTGGGTATGTGATGCTCGCGTGGTAAACCTGTTCGCGTGAACCTGTT 580

Qy 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
Db 581 TACTCTCCGACGCGGAATGTTCCAGCTGATGGTAAATACCGCATTTCCGCGTGGAA 640

Qy 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 641 ATGGAAGCGCTGGTATCTACGCGCTGCTGCAGAAATTTGGCGCGAAGCCCTGACCAATC 700

Qy 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 701 TGCACCGTATCTGACCACTCCGCACTACGAGCAGACCACTCCGCTGAGCGTCAAGACT 760

Qy 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 761 ACCTTCAAGCATGATCAAAATCGCACITGGAAATCCGTTCTGCTGGGCGATAAAGAG 817

BD261824
3128 bp DNA linear PAT 17-JUL-2003
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
BD261824
BD261824.1 GI:33071592
JP 2002533126-A/13.
synthetic construct
SOURCE
ORGANISM
artificial sequences.
REFERENCE
1 (bases 1 to 3128)
Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: JP 2002533126-A 13 08-OCT-2002;
NORPHARMA SPA
OS Artificial Sequence
PN JP 2002533126-A/13
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198

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Wed Jun 9 12:27:37 2004

us-10-035-300a-4.p2n.rge

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PR 23-DEC-1998 IT MI 98A002732
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORISINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N15/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: deod cloned downstream CC
ptac promoter Location/Qualifiers
FH Key 1.3128
FT source /organism="synthetic construct"
FT /mol_type="genomic DNA"
FT /db_xref="taxon:32630"

FEATURES
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        Location/Qualifiers
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                /organism="synthetic construct"
                /mol_type="genomic DNA"
                /db_xref="taxon:32630"

ORIGIN
Alignment Scores: 7.25e-111 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 99.58% Conservative: 0
Percent Similarity: 99.58% Mismatches: 1
Best Local Similarity: 99.58% Indels: 0
Query Match: 99.67% Gaps: 0
DB: 6

US-10-035-300A-4 (1-239) x BD261824 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 198 ATGGCTACCCACACATTAATGCAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 257
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GGCAGCCGCTGCTGGGAGTATATTCCTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACAAAGTTCGCGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyMetGlyProSerCysSerIleTyrThrLysGluLeuThrAsp 80
DB 378 ATGGGTACGGTATGGGTATCCGCTCTCCATCTACACCAAGATTCACCGATCCGT 437
QY 81 PheGlyValLysLysIleAlaArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCGCGGTGAAGAAATATATCCGCGTGGGTTCCTGGCGCAGTTTCTCCACGCTAATA 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGCGCGACGTCGTTATCGGTATGGTGGCTGCCTGACCGATTCCAAAGTTAACCGCATCCGT 557
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTTAAAGACCATGACTTTTGGCGCTATCGCTGCTTCCGATTCGACATGCTGCTAAGCATAGAT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 618 GCAGCTAAAGCACTGGGTATTCGCTGGGTGGGTAACTCTTCTCCGCTGACCTGTTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGCAATGTTCCAGCGTGATGGAAAAATACGGCATTCCTCGCGCTGGAA 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGGAAGCGGCTGGTATCTACCGCGCTGCTGAGAAATTTGGCGCGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 798 TCACCGTATCTGACCATCCGACTTCAGAGCAGACCACTGCGCGCTGAGGTGAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
DB 937 TACTCTCCGACGCGCAATGTTCCAGCGTGATGGAAAAATACGGCATTCCTCGCGCTGGAA 737
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858 ACCTTCAACGACATGATCAAAATCGCACTGGATCGTTCTGCTGGCGATAAGAG 914

RESULT 8
AX027821
LOCUS AX027821 3128 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 13 from Patent WO0039307.
ACCESSION AX027821
VERSION AX027821.1 GI:10188665
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE
1 Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
  Recombinant bacterial strains for the production of natural
  nucleosides and modified analogues thereof
  Patent: WO 0039307-A 13 06-JUL-2000;
  BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
  ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
  GHISOTTI DANIELA (IT)
FEATURES
    Location/Qualifiers
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            /note="deod cloned downstream ptac promoter"

ORIGIN
Alignment Scores: 7.25e-111 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 99.58% Conservative: 0
Percent Similarity: 99.58% Mismatches: 1
Best Local Similarity: 99.58% Indels: 0
Query Match: 99.67% Gaps: 0
DB: 6

US-10-035-300A-4 (1-239) x AX027821 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GGCAGCCGCTGCTGGGAGTATATTCCTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACAAAGTTCGCGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyMetGlyProSerCysSerIleTyrThrLysGluLeuThrAsp 80
DB 378 ATGGGTACGGTATGGGTATCCGCTCTCCATCTACACCAAGATTCACCGATCCGT 437
QY 81 PheGlyValLysLysIleAlaArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCGCGGTGAAGAAATATATCCGCGTGGGTTCCTGGCGCAGTTTCTCCACGCTAATA 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGCGCGACGTCGTTATCGGTATGGTGGCTGCCTGACCGATTCCAAAGTTAACCGCATCCGT 557
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTTAAAGACCATGACTTTTGGCGCTATCGCTGCTTCCGATTCGACATGCTGCTAAGCATAGAT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 618 GCAGCTAAAGCACTGGGTATTCGCTGGGTGGGTAACTCTTCTCCGCTGACCTGTTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGCAATGTTCCAGCGTGATGGAAAAATACGGCATTCCTCGCGCTGGAA 737
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QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 738 ATGAAGCGCTGCTGTATCTACGGCGTGCCTGCAGAAATTTGGCGGAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 798 TGCACCGTATCTGACCACATCCGCACTCACGAGCAGACCACTCCGCGTGAAGCTCAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 858 ACCTTCAACGACATGATCAAAATCGCAATCGCTGGAATCCGTTCTGCTGGCGGATAAAGAG 914

RESULT 9
BD261814
LOCUS BD261814 3383 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261814
VERSION BD261814.1 GI:33071582
KEYWORDS JP 2002533126-A/3
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1 (bases 1 to 3383)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 3 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
CC GeOD
FH Key
FT gene
FEATURES
source
1..3383
Location/Qualifiers
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
ORIGIN
Alignment Scores:
Pred. No.: 8e-111 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-4 (1-239) x BD261814 (1-3383)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
Db 240 ATGGCTACCCACACATTAATGCAAGATGGCGAATTCGCTGACGTAGTTTGAAGCA 299
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 300 GCGCACCCTGCGTGCAGATATATTCGTAACATTCCTTGAAGATCCCGTGAAGTG 359
QY 41 AsnAsnValArgGlyMetIleuGlyPheThrGlyThrLysGlyArgLysIleSerVal 60
Db 360 AACACGCTCGCGTATCGTGGCTTACCGGTACTACAAAGCGCAAAATTCGCTA 419
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80

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Db 420 ATGGGTCAACGGTATGGGTATCCGCTCTCTGCTCCATCTACACCAAGAACTGATCACCGAT 479
QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
Db 480 TTGGGGGTGAAGAAATATTCGCGTGGGTTCCTGTGGCGCAGTTCTTGGCGCAGTAAAA 539
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
Db 540 CTGCGCGACGCTGCTATTCGCTATGGGTGCTGCTGACCGATTCCAAAGTTAACCCGATCCGT 599
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 600 TTTAAAGACCATGACTTTGCGCTATCGCTGACTTCGACATGCTGGCTAAGCAGTAGAT 659
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
Db 660 GCAGCTTAAGCACTGGGTATTTGATGCTCGGTGGTAACTGTTCTCCGCTGACCTGTTT 719
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
Db 720 TACTCTCGGACGCGGAAATGTTGACGTGATCGAAAAATACGGCATTTCTCGCGTGGAA 779
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 780 ATGGAAGCGCGTGGTATCTACGCGCTGCTGCAAGATTTGGCGCAAGCCCTGACCATC 839
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 840 TGCACGCTATCTGACCACTATCGCACTCAGAGCAGACCATGCGCTGAGCGTCAAGACT 899
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 900 ACCTTCAACGACATGATCAAAATCGCACTGGAATCGTTCTGCTGGCGGATAAAGAG 956

RESULT 10
AX027811
LOCUS AX027811 3383 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 3 from Patent WO0039307.
ACCESSION AX027811
VERSION AX027811.1 GI:1018655
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 3 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
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1..3383
Location/Qualifiers
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Plasmid"
ORIGIN
Alignment Scores:
Pred. No.: 8e-111 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-4 (1-239) x AX027811 (1-3383)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20

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Db 240 ATGGCTACCCACACATTAATGAGAAATGGCGATTCCTGACGCTAGCTTTGATGCCA 299  
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 DEFINITION Recombinant bacterial strains for the production of natural  
 nucleosides and modified analogues thereof.  
 ACCESSION BD261825  
 VERSION BD261825.1 GI:33071593  
 KEYWORDS JP 2002533126-A/14.  
 SOURCE synthetic construct  
 ORGANISM artificial sequences.  
 REFERENCE 1 (Bases 1 to 3934)  
 AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.  
 TITLE Recombinant bacterial strains for the production of natural  
 nucleosides and modified analogues thereof  
 JOURNAL Patent: JP 2002533126-A 14 08-OCT-2002;  
 NORPHARMA SPA  
 COMMENT OS Artificial Sequence  
 PN JP 2002533126-A/14  
 PD 08-OCT-2002  
 PF 23-DEC-1999 JP 2000591198  
 PR 23-DEC-1998 IT MI 98A002792  
 PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI  
 ORSINI,  
 PI GIANCARLO TONON, GABRIELE ZUFFI  
 PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC  
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 QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60  
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DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 14 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
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Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
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DB 258 GCGGACCCGCTGCGTGGAGATATATGCTGAAACTTTTCCTTGAAGATGCCGCGTAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACACGTTTCGCGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 377
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
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DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261816
VERSION BD261816.1 GI:33071584
SOURCE JP 2002533126-A/5.
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 4189)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 5 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
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ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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